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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,943	11/03/2003	Kelly Gravelle	T1142/20242	5033
3000	7590	09/23/2009	EXAMINER	
CAESAR, RIVISE, BERNSTEIN, COHEN & POKOTILOW, LTD. 11TH FLOOR, SEVEN PENN CENTER 1635 MARKET STREET PHILADELPHIA, PA 19103-2212				LEE, SEUNG H
2887		ART UNIT		PAPER NUMBER
			NOTIFICATION DATE	
			DELIVERY MODE	
			09/23/2009	
			ELECTRONIC	

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* KELLY GRAVELLE

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Appeal 2009-001992  
Application 10/698,943  
Technology Center 2800

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Decided: September 21, 2009

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Before KENNETH W. HAIRSTON, JOHN C. MARTIN, and  
BRADLEY W. BAUMEISTER, *Administrative Patent Judges*.

BAUMEISTER, *Administrative Patent Judge*.

DECISION ON APPEAL

## STATEMENT OF THE CASE

Appellant appeals under 35 U.S.C. § 134 from the Examiner's final rejection of claims 1-49 and 51. Claim 50 has been indicated as containing allowable subject matter. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

Appellant's invention relates to a system and method for self-service vending of an electronic toll collection device and vending unit. The toll collection vending unit includes a payment acceptance device for accepting payment for the electronic toll collection device; a dispenser for dispensing the electronic toll collection device from the vending unit; and a processing device in communication with the payment acceptance device and which is for providing a stored value for the toll collection device. The processing device stores value for the collection device by transmitting the stored value over a communication link from the vending unit to a remote computer that maintains account information. The processing unit then controls the dispenser to dispense the toll collection device in accordance with the payment accepted by the payment device. Br. 2-3.

The toll collection unit also allows for self-service maintenance of an account associated with the toll collection device. More specifically, the vending unit can read a toll collection device's identifying number, accept a payment from a user, and automatically increase the stored value for the toll collection device. Br. 4. The vending unit also allows a user to check the account balance by reading the toll collection device's identifying number and displaying the stored value to the user. Br. 4-5.

Independent claims 1, 45, and 51 are illustrative. They read as follows:

1. A system for self-service vending of an electronic toll collection device, the device comprising:
  - a vending unit;
  - a payment acceptance device, located in the vending unit, for accepting payment for the electronic toll collection device;
  - a dispenser, located in the vending unit, for dispensing the electronic toll collection device from the vending unit; and
  - a processing device, located in the vending unit and in electronic communication with the payment acceptance device and the dispenser, for providing a stored value for the electronic toll collection device by transmitting the stored value from the vending unit to a remote computer for maintaining account information regarding the electronic toll collection device and controlling the dispenser to dispense the electronic toll collection device in accordance with the payment accepted by the payment device.
45. A method for self-service maintenance of an account for an electronic toll collection device, the electronic toll collection device having an identifying number and being associated with a stored value, the method comprising:
  - (a) providing a vending unit for a user of the electronic toll collection device;
  - (b) receiving the identifying number through the vending unit;
  - (c) automatically accepting a payment from the user through the vending unit; and
  - (d) automatically increasing the stored value for the electronic toll collection device in accordance with the payment accepted in step (c).

51. A method for self-service checking of an account for an electronic toll collection device, the electronic toll collection device having an identifying number and being associated with a stored value, the method comprising:

- (a) providing a vending unit for a user of the electronic toll collection device;
- (b) receiving the identifying number through the vending unit;
- (c) receiving a command through the vending unit to check the account from the user through the user interface;
- (d) automatically accessing the stored value; and
- (d) automatically displaying the stored value to the user through the vending unit.

The Examiner relies on the following prior art references to show unpatentability:<sup>1</sup>

Slavin	US 5,819,234	Oct. 6, 1998
Davis	US 5,892,211	Apr. 6, 1999

Claims 1-49 and 51 stand rejected under 35 U.S.C. § 103(a) as obvious over Slavin in view of Davis.

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<sup>1</sup> In the Answer, the Examiner also argues the teachings of Newsome (US 6,595,416) in relation to claims 45-49. Ans. 12. However, the Examiner acknowledges that Newsome was last cited in the Office Action mailed on January 14, 2005. Ans. 12. Newsome was not relied upon in the final rejection of claims 45-49 that is presently on appeal. *See* Ans. 3. We therefore view the reference to Newsome, at page 12 of the Answer, as an improper effort to bring this reference in the “back door.” *See In re Hoch*, 428 F.2d 1341, 1342 n. 3 (CCPA 1970) (where a reference is relied on to support a rejection, whether or not in a “minor capacity,” there would appear to be no excuse for not positively including that reference in the statement of the rejection.) Accordingly, we consider the rejection under 35 U.S.C. § 103 based solely on the evidence contained in Slavin and Davis.

Rather than repeat the arguments of Appellant or the Examiner, we refer to the Appeal Brief and the Examiner's Answer for their respective details.<sup>2</sup> In this decision, we have considered only those arguments actually made by Appellant. Arguments which Appellant could have made but did not make in the Brief have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii).

## ARGUMENTS AND ISSUES

The Examiner finds that Slavin, directed towards a toll collection system that may be purchased from a store, discloses all of the claims' elements except that it fails to explicitly disclose an electronic toll collection device that may be purchased at a self-service transactional terminal. Ans. 3-4. The Examiner further finds that Davis, directed towards a self-service transactional terminal, teaches this claim limitation missing from Slavin. Ans. 4-5.

Appellant asserts that the combined prior art does not disclose or suggest at least the claimed features of (1) a payment acceptance device, dispenser and processing device, all located within a vending unit (Br. 5); or (2) a processor that transmits stored value to a remote administrative computer in accordance with a payment accepted by the payment device for the purchase of an electronic toll collection device (Br. 5-7). But rather, the proposed combination of references "would have resulted simply in a vending machine that accepts some sort of payment card to sell pre-packaged toll transponders with predetermined values." Br. 6.

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<sup>2</sup> We refer to (1) the Appeal Brief filed Sep. 17, 2007; and (2) the Examiner's Answer mailed Dec. 11, 2007 throughout this opinion.

Regarding claims 45-49 and 51, Appellant further asserts that Davis fails to disclose that any accounting takes place within the vending machine from which items are originally sold. Br. 9.

The issues before us, then, are:

- I. Has Appellant shown that the Examiner erred in concluding that the cited prior art collectively teaches or suggests a system for self-service vending of an electronic toll collection device that includes: (1) a payment acceptance device located in a vending unit for accepting payment for the purchase of an electronic toll collection device; and (2) a processing device located in the vending unit and in electronic communication with the vending unit's payment acceptance device and dispenser, the processing device being for providing a stored value for the electronic toll collection device by transmitting the stored value from the vending unit to a remote computer for maintaining account information regarding the electronic toll collection device in accordance with the payment accepted by the payment device?
- II. Has Appellant shown that the Examiner erred in concluding that the cited prior art collectively teaches or suggests a vending machine that includes either of the additional functionalities of (1) replenishing previously purchased smart toll cards or (2) displaying the smart toll cards' current balance?

#### FINDINGS OF FACT

The record supports the following Findings of Fact (FF) by a preponderance of the evidence:

*Davis*

1. Davis discloses a transaction system that employs “smart card” integrated circuit devices as a substitute for cash. Davis, col. 1, ll. 32-35. The system includes a smart card (“stored value card” or “SVC”) (20) and “different types of automated terminals with which the SVC 20 may be employed.” Col. 4, ll. 9-10. Three such terminals, depicted in Figure 1, are a load value terminal (30), a point of sale (POS) terminal (40), and a vending machine terminal (50). Fig. 1.

A load value terminal 30 is employed for the purpose of loading value into the electronic purse of the SVC 20. The load value terminal . . . is generally similar in appearance to a standard automatic teller machine (ATM) of the kiosk or standalone type. In some applications, an existing ATM may be modified to function as a load value terminal.

Col. 4, ll. 11-17. “The POS terminal 40 . . . is similar in structure and appearance to a standard electronic cash register.” Col. 5, ll. 43-45. “The vending machine terminal 50 comprises essentially a standard standalone-type vending machine having a housing containing a plurality of individual items 52 which may be dispensed through a dispensing opening 54 proximate the lower portion of the vending machine terminal 50.” Col. 6, ll. 57-61.

2. Financial institutions and other entities issue one or more stored value cards (20), to each system user or cardholder. Col. 1, ll. 43-53. A cardholder, using the automated load value terminal (30), loads “value,” or a dollar balance, onto his or her smart card by debiting an existing financial

account, such as a checking, savings, or money market account or by inserting cash into the terminal. Col. 1, ll. 43-53; col. 4, ll. 9-17; Fig. 1.

3. “The SVC 20 may be used for the purchase of all types of goods and/or services in substantially the same way that cash or money is used.” Col. 5, ll. 20-22.

4. The smart card may be used to pay for tolls on a toll road. Col. 5, ll. 26-27.

5. The smart card may also be used for purchasing items from a vending machine terminal 50 that is specially equipped to accept the smart card. Col. 6, l. 57 – col. 7, l. 13; Fig. 1. The vending machine terminal includes a processor that uses an operating program stored in memory to interact with a smart card inserted into a receiving slot of the vending machine for the transfer of value from the smart card to enable the dispensing of one or more items. Col. 7, ll. 1-13.

## PRINCIPLES OF LAW

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *See In re Royka*, 490 F.2d 981, 985 (CCPA 1974). In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. *See In re Fine*, 837 F.2d 1071, 1073 (Fed. Cir. 1988).

Any judgment on obviousness is in a sense necessarily a reconstruction based on hindsight reasoning, but so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made

and does not include knowledge gleaned only from applicant's disclosure, such a reconstruction is proper.

*In re McLaughlin*, 443 F.2d 1392, 1395 (CCPA 1971).

If the Examiner's burden is met, the burden then shifts to the Appellants to overcome the *prima facie* case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. *See In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992).

## ANALYSIS

### *I. Claims 1-44*

Claim 1 requires a payment acceptance device located in a vending unit for accepting payment for the electronic toll collection device. The claim further requires:

*a processing device, located in the vending unit and in electronic communication with the [vending unit's] payment acceptance device and the dispenser, for providing a stored value for the electronic toll collection device by transmitting the stored value from the vending unit to a remote computer for maintaining account information regarding the electronic toll collection device . . . in accordance with the payment accepted by the payment device.*

Claim 1 (emphasis added).

Appellant asserts that the claim language, "payment for the electronic toll collection device," must be interpreted as referring to the initial purchase of the electronic toll collection device (or transponder card)—not to a subsequent increase in stored value of a previously purchased transponder

card. Br. 5-7. Appellant further argues that this feature is not taught by either Slavin or Davis. *Id.* The Examiner appears to agree with Appellant that claim 1 relates only to the initial purchase—as opposed to the replenishment—of the transponder card.<sup>3</sup> The Examiner also concedes that Slavin does not teach this feature, but nonetheless maintains that Davis does. Ans. 4-5.

It is not at all clear from reading the Answer, though, what the Examiner’s basis or rationale is for reaching the conclusion that Davis discloses a vending machine, which itself, includes a processing device for providing a stored value onto an initially purchased smart card as recited in claim 1. More importantly, we find no such disclosure in Davis.

Davis discloses a transaction system for “smart card” integrated circuit devices, which are employed in the transaction system as a substitute for cash. FF 1. The system includes a smart card (or “stored value card”) (20), a load value terminal (30), and a vending machine terminal (50). FF 1. Financial institutions and other entities issue one or more smart cards, or stored value cards (SVC) (20), to each system user or cardholder. FF 2. A cardholder, using a specialized automated “load value terminal” (30), loads “value,” or a dollar balance, onto his or her smart card by debiting an existing financial account, such as a checking, savings, or money market account or by inserting cash into the terminal. FF 2.

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<sup>3</sup> In response to Appellant arguing that the subsequent replenishment of Davis’s smart toll card is irrelevant to the operation of Davis’s vending unit (Br. 6), the Examiner states that the “argument is not persuasive because the claims in the present application do not particularly and clearly recite such feature.” Ans. 10.

The cardholder may use the smart card to purchase virtually any type of goods and/or services. FF 3. For example, the smart card may be used to pay for tolls on a toll road. FF 4. The smart card may also be used for purchasing items from a vending machine terminal 50 that is specially equipped to accept the smart card. FF 5.

The Examiner does assert that another smart card may be one such item sold from the vending machine unit. Ans. 4-5. The Examiner also provides motivation why one would have wanted to sell transponder cards from a vending machine instead of from a storefront. Ans. 5. We even agree that the cited prior art evidences the obviousness of selling transponder cards from a vending machine. However, this fact does not address the further question of whether it would have been obvious for the vending machine terminal to store value for the transponder card by transmitting the stored value from the vending unit to a remote computer *in accordance with the payment accepted by the vending machine for the initial purchase of the card.*

Davis only discloses the vending machine terminal includes a processor that uses an operating program stored in memory to interact with a smart card inserted into a receiving slot of the vending machine for the transfer of value from the smart card to enable the dispensing of one or more items. FF 5. Restated, the processor within the vending machine terminal changes the stored value of a smart card *that is used to purchase items.* Davis does not teach that the processor may change the value of a smart card—or anything else—*that is being purchased from the vending machine.*

Furthermore, Davis's load value terminal or ATM terminal (30) does not satisfy the disputed limitation of claim 1 either. The load value terminal may be used to add value to a card already possessed by a user. FF 2. But Davis does not disclose that the load value terminal may be used to *initially purchase* a smart card. Moreover, Davis discloses the vending machine and ATM terminals as being standalone types of terminals. FF 1. We find no disclosure in Davis that the vending machine and ATM may be integrated into a single terminal.

It seems reasonably clear that the Examiner's rejection is based upon the accumulation of the various functionalities that Davis discloses are respectively associated with Davis's vending machine, ATM, and POS terminals. *See* Ans. 4-8 (citing to various portions of Davis that respectively relate to the separate vending machine, ATM, and POS terminal). However, the Answer is not clear as to whether (1) the Examiner finds it obvious to combine all of these separate functionalities into a single terminal; (2) the Examiner is interpreting the claimed vending unit to read on Davis's entire transaction system or computerized network that includes the discrete, but electrically interconnected, vending machine, ATM, and POS terminals; or (3) the Examiner is simply misreading Davis as expressly disclosing that all of the various terminals' functionalities may be combined into a single terminal. Regardless, the Examiner simply has not adequately explained how the functionalities of Davis's separate terminals are being combined, or why such a modification would be motivated.

We therefore agree with Appellant that the Examiner has not explained why it would have been obvious to a person having ordinary skill

in the art with no knowledge of the presently claimed invention to make such a modification. *See Br. 6.* Based upon the appealed rejection, the only teaching to provide a vending unit possessing the functionality of claim 1 is only found in Appellant's disclosure. As such, the rejection appears to be a product of impermissible hindsight. *See McLaughlin*, 443 F.2d at 1395.

For the foregoing reasons, Appellant has persuaded us of error in the Examiner's obviousness rejection of independent claim 1. Accordingly, we will not sustain the Examiner's decision rejecting that claim or dependent claims 2-14 which depend from claim 1.

Furthermore, like claim 1, independent claim 15 also recites among other limitations:

a processing device, located in the vending unit and in electronic communication with the payment acceptance device and the dispenser, for *providing a stored value* for the electronic toll collection device and controlling the dispenser to dispense the electronic toll collection device in accordance with the payment accepted by the payment device.

Claim 15 (emphasis added). Similarly, independent claim 32 recites method steps that include "automatically providing a stored value for the electronic toll collection device by transmitting the stored value from the vending unit to a remote computer for maintaining account information regarding the electronic toll collection device." Claim 32. For the reasons set forth above in relation to claim 1, then, we also will not sustain the Examiner's decision rejecting (1) independent claim 15, (2) claims 16-31 which depend from claim 15, (3) independent claim 32, and (4) claims 33-44 which depend from claim 32.

*II. Claims 45-49 and 51*

Claim 45 is directed to “[a] method for self-service maintenance of an account for an electronic toll collection device” that includes the steps of “automatically accepting a payment from the user through [a] *vending unit*;” and “*automatically increasing the stored value* for the electronic toll collection device in accordance with [this] payment.” Claim 45 (emphasis added). That is, claim 45 is directed towards a method of replenishing a previously purchased smart toll card—not a method of initially purchasing a smart toll card.

Appellant asserts that the combined prior art does not teach these limitations because:

*Slavin et al* predetermines the stored value on each transponder and packages the transponders for sale through retail stores. Once that happens, the original vending location is out of the process; no payment is accepted through the original location where the transponder was bought in order to increase the stored value. *Davis et al* does not overcome that deficiency, since that reference does not teach any sort of accounting for the items sold.

Br. 9. The second issue, then, is: Has Appellant shown that the Examiner erred in concluding that the combined prior art discloses a vending machine that includes additional functionality for replenishing previously purchased smart toll cards? We find Appellant has shown the Examiner erred.

The Examiner notes that Davis’s point of sale (POS) terminal (40), vending machine terminal (50), and load value (ATM) terminal (30) are various types of self-service transactional terminals. Ans. 4. The Examiner relies on the vending machine terminal (50) for possessing the claimed

vending functionality and relies on the ATM for possessing the claimed replenishing functionality. Ans. 4-5, and 12. The Examiner then concludes that it would have been obvious to sell the transponder cards of Slavin “using the self-service transaction terminal of Davis for the purpose of encouraging the usage of the electronic toll collection device while increasing the convenience of acquiring the device and operation of the device.” Ans. 5.

The problem with the Examiner’s position is that Davis’s vending machine and ATM, while each constitutes a type of self-service transactional terminal, are disclosed as being separate, standalone terminals. FF 1. Davis does not disclose that these standalone terminals may be combined into a single terminal. That is, Davis does not disclose that a single self-service transactional terminal may possess the functionality of both the vending machine (50) and the ATM (30). Furthermore, the Examiner has not even asserted that Davis’s vending machine, when used to dispense Slavin’s transponder cards, must be further modified to also include the functionality of Davis’s ATM. Much less has the Examiner provided any motivation for making such a modification.

Rather, we agree with Appellant that the Examiner has “not explain[ed] why it would have been obvious to a person having ordinary skill in the art *with no knowledge of the present claimed invention* to make such an incorporation.” Br. 6. The Examiner’s decision to reject claim 45 appears to be a product of impermissible hindsight. *See McLaughlin*, 443 F.2d at 1395.

For the foregoing reasons, Appellant has persuaded us of error in the Examiner’s obviousness rejection of independent claim 45. Accordingly, we will not sustain the Examiner’s decision rejecting that claim or dependent claims 46-49 which depend from claim 45.

Moreover, the shortcomings of the Examiner’s rejection of independent claim 45 also apply to independent claim 51. Method claim 51 sets forth the steps of “automatically accessing the stored value [of a transponder card]; and automatically displaying the stored value to the user through the vending unit.” Claim 51. That is, claim 51 requires that the vending machine display the current balance for the smart toll card.

Davis does not disclose, though, that the vending machine can display the smart toll card’s balance. One skilled in the art would have alternatively associated that functionality with Davis’s ATM terminal. *See* FF 1. For the reasons set forth above in relation to claim 45, then, we will also not sustain the Examiner’s obviousness rejection of claim 51.

## CONCLUSION OF LAW

I. Appellant has shown that the Examiner erred in concluding that the cited prior art collectively teaches or suggests a system for self-service vending of an electronic toll collection device that includes: (1) a payment acceptance device located in a vending unit for accepting payment for the purchase of an electronic toll collection device; and (2) a processing device located in the vending unit and in electronic communication with the vending unit’s payment acceptance device and dispenser, the processing device providing for a stored value for the electronic toll collection device

by transmitting the stored value from the vending unit to a remote computer for maintaining account information regarding the electronic toll collection device in accordance with the payment accepted by the payment device.

II. Appellant has shown that the Examiner erred in concluding that the cited prior art collectively teaches or suggests a vending machine that includes either of the additional functionalities of (1) replenishing previously purchased smart toll cards or (2) displaying the smart toll card's current balance.

Accordingly, Appellant has shown that the Examiner erred in rejecting claims 1-49 and 51 under 35 U.S.C. § 103.

## DECISION

We do not sustain the Examiner's rejection with respect to all pending claims on appeal. Therefore, the Examiner's decision rejecting claims 1-49 and 51 is reversed.

Appeal 2009-001992  
Application 10/698,943

REVERSED

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CAESAR, RIVISE, BERNSTEIN,  
COHEN & POKOTILOW, LTD.  
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1635 MARKET STREET  
PHILADELPHIA, PA 19103-2212